

CIVIL DISTRICT COURT
PARISH OF ORLEANS
STATE OF LOUISIANA

7 GLORIA SCOTT AND *
8 DEANIA JACKSON, *
9 * NO. 96-8461
10 VERSUS * DIVISION "I"
11 * SECTION 14
12 THE AMERICAN TOBACCO *
13 COMPANY, INC., ET AL. *

17 Transcript of proceedings before the
18 Honorable Richard J. Ganucheau, Judge Pro Tempore,
19 Civil District Court, Parish of Orleans, State of
20 Louisiana, 421 Loyola Avenue, New Orleans, Louisiana
21 70112, commencing on June 18, 2001.

27 * * * * *
28 Wednesday Morning Session
29 February 26, 2003
30 9:50 a.m.
31 * * * * *

I N D E X

2 Witness Page
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Cross (By Mr. Gay) 14968

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Wednesday Morning Session

February 26, 2003

9:50 a.m.

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P R O C E E D I N G S

* * * * *

(In open court with a jury present:)

THE COURT:

Good morning.

Dr. Farone, you are still under oath.

THE WITNESS:

Yes.

THE COURT:

Cross-examination of Dr. Farone?

MR. GAY:

Thank you, Your Honor.

Good morning, ladies and gentlemen.

-- -- --

WILLIAM A. FARONE, Ph.D.

being previously duly sworn by the Clerk, testifies

and says further as follows:

-- -- --

CROSS-EXAMINATION

BY MR. GAY:

Q. Good morning, Dr. Farone.

A. Good morning.

Q. As I indicated the other day, I'm Charlie Gay
and I represent Philip Morris, and this is my chance
to ask you a few questions today. Let's see if we
can do this as quickly as possible and get you out
of here today; okay?

A. Thank you.

14969

1 Q. You worked at Philip Morris for approximately
2 eight years, from 1976 to 1984?
3 A. Yes.

4 Q. All right. And you have been gone from
5 Philip Morris for about twenty years?
6 A. About, yes.
7 Q. And then you have never worked at another
8 cigarette company in your life other than
9 Philip Morris; right?
10 A. That's correct.
11 Q. Now, you said that one of the reasons that
12 you were hired by Philip Morris was to develop a
13 reduced-hazard cigarette; right?
14 A. That's correct.
15 Q. And if I understand it, you spent about 80
16 percent of your time during that eight years you
17 worked for Philip Morris trying to develop a reduced
18 hazard cigarette?
19 A. Yes.
20 Q. And that was a mission that you believed in;
21 correct?
22 A. Yes.
23 Q. And that -- and you were convinced at that
24 time that that was Philip Morris' mission?
25 A. Yes.
26 Q. Now, before you were actually hired or went
27 to your interview with Philip Morris, did you do a
28 lot of reading on issues dealing with cigarettes?
29 A. Yes.
30 Q. And one of the things you found out in doing
31 that research was that there was a warning on every
32 pack of cigarettes; correct?

14970

1 A. That's correct.
2 Q. And that's really probably something you
3 already knew. You didn't have to do research on
4 that?
5 A. That's correct.
6 Q. So you knew when you were going to be
7 interviewed by Philip Morris before you were hired
8 that this was a company that made a dangerous
9 product?
10 A. That's correct.
11 Q. And you understood that the government allows
12 the sale and purchase of this dangerous product?
13 A. That's correct.
14 Q. And because of this sort of research you did
15 before you had the interview, you already knew that
16 Philip Morris had been working on ways to reduce the
17 risks of cigarettes for quite some time; correct?
18 A. Correct.
19 Q. And when you decided to take the job, you
20 knew or believed that Philip Morris had already
21 been -- already taken some significant steps toward
22 making cigarettes with fewer potentially hazardous
23 substances?
24 A. That's correct.
25 Q. Did you have a chance to look at their
26 facilities before you were hired?
27 A. I did.
28 Q. And you were impressed with their facilities,
29 weren't you?
30 A. I was.
31 Q. You were impressed with the technical
32 equipment?

14971

1 A. Yes.
2 Q. It appeared to you when you first went to
3 work for Philip Morris that Philip Morris had put a
4 lot of time, money and effort into developing a less
5 hazardous cigarette; correct?
6 A. Yes, that's correct.
7 Q. For example, by the time you arrived at
8 Philip Morris, Philip Morris had already put filters
9 on cigarettes?
10 A. That is correct.
11 Q. And they had already used what you described
12 to the jury yesterday was expanded tobacco?
13 A. Yes.
14 Q. And they had already used reconstituted
15 tobacco, which you described yesterday; right?
16 A. That is correct.
17 Q. And they had already used what's called
18 porous paper, the paper with the holes in it;
19 correct?
20 A. That is correct.
21 Q. You mentioned charcoal filters yesterday, I
22 believe. Cigarettes with charcoal filters have been
23 on the market in the United States since the 1950s;
24 correct?
25 A. Yes.
26 Q. And Philip Morris used a charcoal filter in
27 the Multifilter cigarettes back in the 1960s;
28 correct?
29 A. That's correct.
30 Q. So Philip Morris had put charcoal filters on
31 a brand of cigarettes, maybe others, before you
32 arrived at the company ten years before you arrived
14972

1 at the company; correct?
2 A. That's correct.
3 Q. And Philip Morris still offers its customers
4 a choice of a cigarette with a charcoal filter?
5 A. That's my understanding, yes.
6 Q. All right. And just so it's clear, this is a
7 pack of Parliament 100s.
8 MR. GAY:
9 May I approach, Your Honor?
10 THE COURT:
11 Yes.
12 BY MR. GAY:
13 Q. Now, that pack of Parliament 100s has
14 "Charcoal" written right on the front of it, doesn't
15 it?
16 A. It does.
17 Q. And I can go to a store on the way home from
18 trial today and I could buy that pack of cigarettes;
19 correct?
20 A. I'm not sure, but presumably, yes.
21 Q. Thank you, Dr. Farone.
22 Now, you talked yesterday about getting rid
23 of what's called nitrates. Do you remember that?
24 A. Yes.
25 Q. And nitrates are the things that produce when
26 the cigarette is burned called nitrosamines. Is
27 that correct?
28 A. Not directly. Not quite.
29 Q. Well, you talked about getting rid of
30 nitrates in order to reduce nitrosamines; right?

31 A. That's correct, yes.
32 Q. And nitrosamines are some of the bad actors
14973
1 in cigarette smoke; correct?
2 A. If you mean toxic, yes.
3 Q. In other words, that's one of the things the
4 public health community said, let's reduce or
5 eliminate nitrosamines; right?
6 A. That's correct.
7 Q. When you arrived at Philip Morris in 1976,
8 the company had already implemented a process for
9 removal of nitrates; correct?
10 A. Reduction.
11 Q. Well, they had a process called
12 crystallization; right?
13 A. Yes.
14 Q. And crystallization removed 90 percent of the
15 nitrates from reconstituted tobacco?
16 A. That is correct.
17 Q. It was a good thing for Philip Morris to
18 implemented this crystallization process?
19 A. That is correct.
20 Q. And that was done before you even got to
21 Philip Morris?
22 A. That is correct.
23 Q. Now, let's talk a little bit about how you
24 spent your first year at Philip Morris, if we could.
25 You spent your first year, I think -- were
26 you hired as a senior scientist the first year?
27 A. No.
28 Q. What was your position?
29 A. Associate principal scientist.
30 Q. Associate principal scientist, thank you.
31 And you spent your first year getting
32 acquainted with technology and operations being used
14974

1 by Philip Morris, huh?
2 A. That's correct.
3 Q. It was sort of an expended orientation
4 program?
5 A. And a study program, that's correct.
6 Q. You visited the company's manufacturing
7 plants?
8 A. Yes.
9 Q. You talked to a lot of people within the
10 company?
11 A. Yes.
12 Q. You went around and interviewed almost all of
13 the scientists at Philip Morris during that time;
14 correct?
15 A. That's correct.
16 Q. You met with scientists, you met with
17 directors, and you met with managers; correct?
18 A. Correct.
19 Q. You spent a lot of time in the company's
20 library?
21 A. Yes.
22 Q. You read a lot of external documents; in
23 other words, documents outside of the company?
24 A. Yes.
25 Q. About cigarettes?
26 A. Yes.
27 Q. And about the process of making cigarettes?

28 A. That's correct.
29 Q. You read internal documents of Philip Morris
30 as far back as they had them; right?
31 A. Yes.
32 Q. You read documents going back into the 1930s?
14975

1 A. Yes.
2 Q. You spent the first year at Philip Morris
3 learning everything you could about the company?
4 A. That's correct.
5 Q. And is it fair to say, Dr. Farone, that you
6 met a lot of decent, hard working people at
7 Philip Morris?
8 A. That's fair.
9 Q. And you believed at that time that these
10 people were dedicated, like you were, to making a
11 less hazardous cigarette?
12 A. The majority of them, yes.
13 Q. After that first year, after you learned
14 everything you could about Philip Morris, you knew
15 the product was a dangerous product, you decided to
16 continue working there; right?
17 A. Yes.
18 Q. And you were put in the position of director
19 of what -- one of the directorates at the research
20 and development area of the company; right?
21 A. Right.
22 Q. And that was director of applied research;
23 correct?
24 A. Correct.
25 Q. And when you got that position, you stayed on
26 with Philip Morris another seven years after that;
27 correct?
28 A. That's correct.
29 Q. And the mission of your directorate was to
30 help develop a less hazardous cigarette?
31 A. That was one, yes.
32 Q. And designing safer cigarettes was the
14976

1 principal mission of the people that worked for you?
2 A. Yes.
3 Q. When you got there, there were about forty
4 people in the directorate working on that mission?
5 A. That's correct.
6 Q. Over the next seven years, that number
7 increased significantly, didn't it?
8 A. Yes.
9 Q. By the time you left Philip Morris, seven
10 years later, there were about two hundred to two
11 hundred fifty people working for you; right?
12 A. That's correct.
13 Q. And most of those people spent 100 percent of
14 their time trying to come up with techniques and
15 technology to develop a safer cigarette; right?
16 A. That's correct.
17 Q. They were hired and paid by Philip Morris to
18 do that, just like you were?
19 A. Yes.
20 Q. And over the seven years that you were the
21 director of applied research, you hired many of
22 these people?
23 A. I did, yes.
24 Q. In other words, you recruited some of them?

25 A. Yes.
26 Q. You interviewed them?
27 A. Yes.
28 Q. You made sure that they were dedicated to the
29 mission of trying to develop a reduced hazard
30 cigarette?
31 A. That's correct.
32 Q. And not everybody wants to work for a tobacco

14977

1 company; right?
2 A. That's also correct.
3 Q. Yeah. So you wanted to make sure you had
4 people who were willing to work in a company that
5 made a product that is dangerous but legal to sell,
6 and were committed to the mission that was your
7 directorate's mission; right?
8 A. Yes, I can agree with that.
9 Q. And you tried to hire the best qualified
10 people you could find for this mission?
11 A. That is correct.
12 Q. Now, the people working in your directorate,
13 the applied research division, they were not the
14 only people at Philip Morris who were working to
15 develop a safer cigarette; right?
16 A. That's also correct.
17 Q. The applied research division was -- we
18 talked a little bit about this -- one of several
19 directorates within the department of research and
20 development at Philip Morris; right?
21 A. Correct.
22 Q. The entire department of research and
23 development had about six hundred scientists?
24 A. Well, it changed with time.
25 Q. By the time you left, let's put it that way.
26 By the time you left, they had about six hundred
27 scientists who were dedicated to the effort to try
28 to make a reduced hazard cigarette?
29 A. Well, about 80 percent of those six hundred
30 scientists were.
31 Q. Okay, fair enough. No problem.
32 For example, Dr. Jerry Whidby, was he one of

14978

1 those types of scientists?
2 A. He worked for me for a while, yes.
3 Q. He worked in a division of your directorate?
4 A. He worked actually in two divisions of my
5 directorate.
6 Q. Two divisions, okay.
7 Now, when you left Philip Morris in 1984, you
8 were proud of the work you had done while you were
9 there; right?
10 A. Yes. The work, yes.
11 Q. In fact, when you left Philip Morris in 1984
12 you believe the work that you had done and the
13 people in your directorate on reduced risk
14 cigarettes influenced the entire tobacco industry to
15 have less hazardous cigarettes?
16 A. Yes.
17 Q. And you believed that Philip Morris when you
18 left was still dedicated to developing a reduced
19 risk cigarette?
20 A. Yes.

21 THE WITNESS:

22 And Your Honor, may I explain.

23 THE COURT:

24 You may explain your answer if the
25 explanation is germane to the question.

26 THE WITNESS:

27 Yes.

28 A. The effort of the people was still dedicated
29 to do that. There was some questions that I
30 discussed yesterday about the company's motivations
31 in various facets of doing that.

32 Q. So the people that worked in the Research &
14979

1 Development Department at Philip Morris were doing
2 things that you believe might reduce the hazards to
3 people who were smoking cigarettes?

4 A. Yes.

5 Q. And you believe that the work that you were
6 doing at the applied research directorate was in the
7 best interest of Philip Morris consumers; correct?

8 A. That is correct.

9 Q. And that objective was to try to serve the
10 public health by doing everything possible to make a
11 less hazardous cigarette?

12 A. I agree with that.

13 Q. All right. Now, Doctor, let me just ask you
14 a few questions in terms of your experience in the
15 tobacco industry.

16 You never worked for R. J. Reynolds; is that
17 correct?

18 A. That's correct.

19 Q. And you never worked for Lorillard?

20 A. That's also correct.

21 Q. You never worked for Brown & Williamson?

22 A. That's correct.

23 Q. And you never worked for the Council for
24 Tobacco Research?

25 A. That's correct.

26 Q. You testified yesterday about a lot of things
27 that didn't happen in your directorate at
28 Philip Morris; right?

29 A. I'm not sure I understand that question.

30 Q. Well, you testified about a lot of things
31 like -- for example, Dr. Osdene, he was not in your
32 directorate?

14980

1 A. Oh, I see. Yes, that's correct.

2 Q. He didn't work for you and you didn't work
3 for him?

4 A. That's correct.

5 Q. He was the head of his own directorate?

6 A. That is correct.

7 Q. You made reference to a Dr. Victor DeNoble.
8 He wasn't in your directorate?

9 A. That is correct.

10 Q. You were not his supervisor?

11 A. No, that's correct.

12 Q. Now, you made a reference to Myron Johnson.
13 He was not in your directorate?

14 A. He was at one time, yes, at the end of my
15 career there.

16 Q. At the very end?

17 A. Yes. The last six months or so.

18 Q. Fair enough, fair enough.

19 You made reference to a Dr. William Dunn, and
20 he wasn't in your directorate?

21 A. That is correct.

22 Q. And you were not his supervisor?

23 A. That's correct.

24 Q. You talked about biological research a lot
25 yesterday. But your directorate wasn't responsible
26 for conducting the biological research; right?

27 A. That's right.

28 Q. You talked about a research lab called
29 INBIFO. But you had no responsibility for INBIFO
30 while you were at Philip Morris?

31 A. That's correct.

32 Q. And INBIFO was the lab in Europe, right, the

1 research lab in Europe that you talked about?

2 A. Yes.

3 Q. You talked about product testing yesterday.
4 But you weren't in charge of product testing when
5 you were at Philip Morris; right?

6 A. Well, it depends on what we are talking
7 about. The last six months I was of some of the
8 tests that were done.

9 But in general I can agree with you.

10 Q. Okay, thank you, sir.

11 Now, let's talk a little bit about tar
12 reduction efforts, if we could. Tar is the
13 suspected problem with respect to the hazards of
14 cigarettes; right? It's one of them. It's the main
15 one, isn't it?

16 A. Well, I'm not quite sure -- yes, I can agree
17 that -- yeah.

18 Q. For example, the public health community,
19 like the NCI, the Surgeon General, American Cancer
20 Society, those types of organizations, thought that
21 reducing tar and nicotine deliveries was the
22 appropriate course of action for making reduced
23 hazard cigarettes; right? For many years they
24 thought that?

25 A. Well, yes, secondary to stop smoking. Yes,
26 that's correct.

27 Q. And that was based on the belief that less is
28 better?

29 A. Yes.

30 Q. And the public health community urged you and
31 your scientists at Philip Morris to bring tar
32 deliveries down; right?

14982

1 A. I'm not quite sure how -- indirectly I can
2 agree with you, yes.

3 Q. All right, that's fine.

4 When you were at Philip Morris, you thought
5 that lowering tar and nicotine levels was a good
6 idea?

7 A. Yes, I did.

8 Q. Now, let's talk about that. By the early
9 1950s, there were certain prominent scientists who
10 had concluded that cigarette smoking caused lung
11 cancer; right?

12 A. That's correct.

13 Q. And some of these prominent scientists began
14 to recommend that the tobacco companies should
15 reduce tar?

16 A. That's correct.
17 Q. The carcinogens are supposedly in the tar?
18 A. That's correct.
19 Q. And the idea was if the carcinogens are in
20 the tar, the tobacco companies should find a way to
21 reduce the tar?
22 A. That's correct.
23 Q. One of the scientists, the leading scientists
24 at that time recommending that tar be reduced was
25 Dr. Wynder?
26 A. Yes.
27 Q. Dr. Ernst Wynder, okay.
28 A. Yes.
29 Q. You have heard of him?
30 A. Yes. I know Dr. Wynder, yes.
31 Q. And you have read scientific articles from
32 the '50s in which Dr. Wynder urged tobacco companies

14983

1 to reduce the tar level?

2 A. Indirectly, yes. Indirectly stated.

3 Q. Okay.

4 MR. GAY:

5 Ted, could you please pull up
6 Defendant's Exhibit SA-1803 on the screen
7 for Dr. Farone and the lawyers?

8 BY MR. GAY:

9 Q. Okay, Dr. Farone, this is an article you have
10 seen before?

11 A. Yes, I have.

12 Q. It's an article published in 1957 in the
13 journal Cancer?

14 A. Well, I can't tell from here, but I have seen
15 the article before.

16 Q. Well, it's a peer-reviewed, reliable,
17 respected article?

18 A. It's been relied upon, yes.

19 Q. And Dr. Ernst Wynder is a prominent smoking
20 and health researcher?

21 A. Yes.

22 MR. GAY:

23 May we publish, Your Honor?

24 THE COURT:

25 You may publish it.

26 No objection, I presume?

27 MR. STEPHEN HERMAN:

28 No objection.

29 MR. GAY:

30 Would you highlight just the title,
31 Ted? And then let's go to page 1204, the
32 fourth page of the document.

14984

1 BY MR. GAY:

2 Q. And Doctor, this is back in like 1957?

3 A. Yes, it is.

4 MR. GAY:

5 Page 1204, Ted?

6 May we publish, Your Honor? I'm
7 sorry.

8 THE COURT:

9 You may publish it.

10 MR. GAY:

11 And Ted, could you go to the
12 paragraph that begins with "It is feasible

13 to produce," and highlight that, blow it
14 up?
15 BY MR. GAY:
16 Q. Okay. Doctor, this is 1957, Dr. Farone. It
17 says -- Dr. Wynder is saying:
18 It is feasible to produce filter tips
19 that will allow the cigarette a
20 satisfactory pressure drop and
21 satisfactory flavor and, at the same time,
22 remove about 40 percent of the tar of the
23 cigarette smoke.
24 And if we go down a little bit, it says:
25 A reduction to such level, as both
26 animal experiments and human statistical
27 studies show, will be followed by a
28 significant reduction in cancer risk.
29 Do you see that?
30 A. Yes. But there is more.
31 Q. Well, this advice to reduce tar yields by
32 Dr. Wynder was good advice at that time, don't you
14985

1 believe?
2 A. Yes, that's good advice. But that's not the
3 limit of his advice.
4 Q. So this is just one of the articles in the
5 1950s that urged the tobacco companies to reduce
6 tar; correct?
7 A. That is correct.
8 Q. All right. Now --
9 MR. GAY:
10 You can take that down, Ted.
11 BY MR. GAY:
12 Q. In 1950s the state of the art in reducing tar
13 and nicotine was not the same as it is today; is
14 that fair to say? You talked about the state of the
15 art.
16 A. That's fair, yes.
17 Q. In other words, science and technology have
18 improved over the decades; right?
19 A. Yes.
20 Q. And that's just the way science and
21 technology works; right?
22 A. That's correct.
23 Q. We can do more things today with science and
24 technology than we could in the '50s?
25 A. There is improvements over time, that's
26 correct.
27 Q. And you need -- when you are talking about
28 changes in cigarettes and you are talking about what
29 can be done, you have to look at the time and the
30 circumstances; correct?
31 A. Yes.
32 Q. All right. Because there may be things that
14986

1 you could do today that you couldn't have done in
2 the 1960s; right?
3 A. That is correct.
4 Q. Now, am I correct that it was the position of
5 the government and the public health community in
6 the 1950s and 1960s and the 1970s that people should
7 quit smoking, but if they weren't going to quit,
8 they should switch to a low tar cigarette?
9 A. I think that was the conclusion up to '79.

10 Q. And by the time you got to Philip Morris in
11 1976, that was still the recommendation of the
12 public health community?
13 A. Yes.
14 Q. And again, you thought it was a good thing
15 that Philip Morris had spent all the time, money and
16 effort over the years to reduce tar levels?
17 A. Yes, I did.
18 Q. And you felt that the tobacco companies in
19 general had acted responsibly in reducing tar levels?
20 A. Yes, generally.
21 Q. If you compare the modern cigarette with the
22 cigarette of the 1950s, there has been about a 75
23 percent reduction in tar as far as sales-weighted
24 average is concerned; right?
25 A. When was the comparison from? I missed the
26 first part of your question.
27 Q. Just the modern cigarette.
28 A. From 1950?
29 Q. From 1996.
30 A. No. But where does it start?
31 Q. Starting in the 1950s.
32 A. Okay. Yes, about 70, 75 percent. Sorry.

14987

1 Q. Now, let's talk about how the companies did
2 reduce tar.
3 One of the things you talked about yesterday
4 was the reconstituted tobacco; right?
5 A. Yes.
6 Q. And one of the things the companies did to
7 reduce tar was to use reconstituted tobacco,
8 sometimes just called recon; right?
9 A. Well, they used it, yes. I'm not quite --
10 Q. And recon tobacco is made by taking stems and
11 scraps from tobacco, putting them together in these
12 sheets; right?
13 A. That's correct.
14 Q. And the video you showed yesterday to the
15 jury was Philip Morris' recon plant; right?
16 A. That's correct.
17 Q. That's where they make reconstituted tobacco?
18 A. That's where Philip Morris makes
19 reconstituted tobacco.
20 Q. Right. And there are other plants that they
21 have that don't involve the recon process; right?
22 A. That is correct.
23 Q. We didn't see those yesterday; right?
24 A. Correct.
25 Q. You were only interested in showing -- I
26 didn't say -- that's not fair.
27 The only thing that the video showed
28 yesterday was the recon process?
29 A. That's correct.
30 Q. And recon, of course, you showed it's done
31 with this slurry to some extent and putting it back
32 on the sheet, the tobacco sheet, and then dried out,

14988

1 and by doing that it becomes less biologically
2 active; right?
3 A. Well, yes, generally.
4 Q. Okay.

5 THE WITNESS:
6 Can I explain, Your Honor?

7 THE COURT:
8 You may explain if it's relevant to
9 the question that was asked.
10 THE WITNESS: Yes.
11 A. The biological activity depends on how you do
12 that.
13 The BL sheet is extremely active. The RL
14 sheet with a high cellulose level is very low
15 activity. So there is a range of activities
16 depending on how you do it.
17 Q. But in other words, if you take the
18 reconstituted tobacco and you do a biological test
19 on it, it's less biologically active then; right?
20 A. Well, some forms of RL, yes.
21 Q. It creates -- it causes less tumors in
22 biological tests?
23 A. Yes.
24 Q. It creates less -- recon also creates less
25 what's called phenols?
26 A. Yes.
27 Q. Is that the way you pronounce that word,
28 phenols or phenols?
29 A. Either way.
30 Q. And phenols or phenols are one of the bad
31 actors of the smoke that scientists have said may be
32 related to health problems; right?

14989

1 A. That's correct.
2 Q. And so reconstituted tobacco also creates
3 less of a constituent you talked about yesterday of
4 smoke called benzo(a)pyrene; right?
5 A. That's correct.
6 Q. And that's another one of those constituents
7 of smoke that scientists have said may be related to
8 health problems; right?
9 A. That is correct.
10 Q. Now, when we talk about constituents,
11 Dr. Farone, those of us who have never been in the
12 tobacco industry, you are talking about the things
13 that form -- you are talking about some of the
14 things that form when you burn tobacco?
15 A. That is correct.
16 Q. Okay. You are not talking about what's
17 necessarily in the tobacco. You are talking about
18 what's formed as it burns and comes out as smoke;
19 right?
20 A. Well, both.
21 Q. Both, all right, fair enough.
22 And you think that the use of reconstituted
23 tobacco is a good thing; right?
24 A. Yes.
25 Q. And in fact, you said they should use it in
26 all -- they should make cigarettes out of nothing
27 but reconstituted tobacco; right? That's one of the
28 things you said?
29 A. Yes.
30 Q. All right. And you said that would save them
31 money?
32 A. That's true too.

14990

1 Q. Now, let's talk about filtration.
2 Philip Morris also did work with filters to help
3 make a less hazardous cigarette; right?

4 A. Yes.
5 Q. Filters had already been on cigarettes long
6 before you got to Philip Morris?
7 A. That's correct.
8 Q. Back in the '50s, most cigarettes were
9 unfiltered?
10 A. That's correct also.
11 Q. Today they are mostly filtered?
12 A. Yes.
13 Q. There are still some unfiltered cigarettes on
14 the market?
15 A. Yes.
16 Q. Now, when you were at Philip Morris, you had
17 a division within your directorate that was
18 specially focused on working with filters?
19 A. Yes.
20 Q. That was the physical research division?
21 A. That's correct.
22 Q. And the scientists in that division spent 80
23 to 90 percent of their time working on filters?
24 A. A large amount, yes.
25 Q. And these were good scientists?
26 A. Yes.
27 Q. They looked at how the fibers in filters fit
28 together?
29 A. Roughly speaking, yes.
30 Q. And they looked at how the smoke can get
31 through those fibers?
32 A. Yes.

14991

1 Q. They worked with chemicals that they could
2 put on the filter to try to remove some of the bad
3 constituents of smoke?
4 A. Correct.
5 Q. Like -- I will probably mess this one up --
6 glycerol triacetate?
7 A. Well, it's glycerol triacetate, but --
8 Q. What did you say it was?
9 A. Glycerol triacetate.
10 Q. That's one of the things they used to try to
11 remove some of the bad stuff from cigarette smoke?
12 A. Well, it -- not quite.
13 Q. That's a chemical they actually used on
14 filters. And is it fair to say that the purpose was
15 to try to reduce the hazards?
16 A. Yes.
17 Q. Okay, that's fair enough.
18 Because that chemical helps remove phenols or
19 phenols?
20 A. Indirectly, yes, that's correct.
21 Q. It helps remove acrolein?
22 A. Yes.
23 Q. It helps removed volatile nitrosamines?
24 A. Yes.
25 Q. And these were things that these scientists
26 were trying to do while you were at Philip Morris?
27 A. That is correct.
28 Q. Now, let's talk a little about ventilation,
29 these -- when you were at Philip Morris, you did
30 work on ventilation; right?
31 A. That's correct.
32 Q. Actually that's one of the areas where you

14992

1 worked very hard?
2 A. Okay, yes.
3 Q. You don't disagree with that?
4 A. No, I don't.
5 Q. And ventilation, we have seen some of the
6 demonstratives of ventilation of the cigarette,
7 that's where they put the holes around the filter?
8 A. The holes in the filter, around the filter,
9 yes.
10 Q. Okay, fair enough.
11 And ventilation helps lower tar and nicotine
12 of the cigarette; right?
13 A. That is correct.
14 Q. It reduces tar rapidly?
15 A. I don't quite know what you mean by that, but
16 it reduces tar. The more holes, the more reduction.
17 Q. And it's one of the most important things you
18 can do to a cigarette to reduce tar?
19 A. Yes. If you want to do it dramatically and
20 get a very large reduction, yes.
21 Q. And it reduces carbon monoxide?
22 A. Yes.
23 Q. It reduces hydrogen cyanide?
24 A. Yes.
25 Q. It reduces what you talked about yesterday
26 was called polycyclic aromatic hydrocarbons; right?
27 A. Yes.
28 Q. The easy way to say that is PAHs?
29 A. Yes.
30 Q. And a PAH, for those of us who aren't
31 chemists, that's a benzo -- for example, benzopyrene
32 is a PAH?

14993

1 A. That's correct.
2 Q. And it reduces tobacco-specific nitrosamines?
3 A. Yes.
4 Q. It reduces volatile nitrosamines?
5 A. Yes.
6 THE WITNESS:
7 Your Honor, could I explain?
8 THE COURT:
9 Yes.
10 A. The amount of dilution is important in the
11 size of the reduction. If you only use a low
12 dilution, you can actually increase some of those.
13 You have to use a 50 percent or more dilution and
14 then you will reduce it.
15 So I didn't want to be inaccurate. If you do
16 it only a little bit, actually some of them go up.
17 And then it goes down when you increase it beyond
18 that point.
19 Q. I appreciate you pointing that out, because
20 the point you are making is that reducing the things
21 in cigarette smoke that can be hazardous is a
22 complex process; right?
23 A. That is correct.
24 Q. It's a difficult process?
25 A. It's scientifically challenging.
26 Q. Because if you do one thing to reduce a
27 hazard, you may increase a hazard elsewhere, right,
28 as you just pointed out?
29 A. Yes. You have to be very careful.
30 Q. But in general, ventilation decreases the gas

31 phase compounds in smoke; right?

32 A. Yes.

14994

1 Q. And it decreases the yields of all of the
2 potential bad actors constituents?

3 A. With my qualification, yes.

4 Q. Which you gave, right.

5 A. Yes.

6 Q. So that's a good thing; right?

7 A. Yes.

8 Q. Now, you helped developed the most modern way
9 of making those vent holes; right?

10 A. Yes.

11 Q. You don't want to take total credit for that
12 because you had a lot of good people working for you
13 to assist you in doing that; right?

14 A. That is correct.

15 Q. And you were actually involved in designing
16 where those vent holes would be put on the filter;
17 right?

18 A. Yes.

19 Q. You were trying to put those vent holes in
20 the most effective place; correct?

21 A. I can agree with that, yes.

22 Q. You even did research because you didn't want
23 people covering the holes; right?

24 A. That is correct.

25 Q. You didn't want the holes to be too far to
26 the lit end of the cigarette; right?

27 A. That is correct.

28 Q. And you didn't want the holes to be too close
29 to the filter end of the cigarette?

30 A. That's correct.

31 Q. All right. So you made recommendations about
32 where the vent holes should be placed after you did

14995

1 this research?

2 A. That is correct.

3 Q. And you thought at the time you were at
4 Philip Morris, you had done everything possible to
5 put the vent holes in the right place so they didn't
6 get covered up by the fingers or the lips?

7 A. That is correct.

8 Q. You were not part of some effort to place the
9 holes so they would be covered up; right?

10 A. That is correct.

11 Q. You did not try to engage in some kind of
12 deception of the smoking public in your work with
13 vent holes?

14 A. That's correct.

15 Q. And none of your other scientists who were
16 involved with vent holes placement and creation of
17 vent holes were engaged in any kind of deception of
18 the public either; right?

19 A. That is correct.

20 THE WITNESS:

21 Your Honor, may I explain?

22 THE COURT:

23 You may explain.

24 A. The point is that while that is correct, you
25 can't ever place them someplace where there isn't
26 some coverage, either by some smokers some of the
27 time with regard to fingers and lips. That's all.

28 Q. But the research you did -- and that research
29 has been done since then too -- has shown that the
30 covering of vent holes is not a significant problem;
31 right?
32 A. It's not often done, that's correct.

14996

1 Q. Okay, thank you.
2 Now, another area of reducing tar that you
3 talked about yesterday was called expanded tobacco;
4 right?
5 A. Correct.
6 Q. That's another way to bring tar and nicotine
7 levels down?
8 A. It is.
9 Q. And that's that process, you puff it up back
10 to approximately its original size?
11 A. Yes.
12 Q. Because when you dry or cure -- and you
13 explained curing yesterday -- the tobacco, it
14 shrinks?
15 A. That's correct.
16 Q. You used the example of a dead leaf. It's
17 smaller than when it fell off the tree; right?
18 A. That is correct.
19 Q. Okay. And you think the use of expanded
20 tobacco to reduce tar and nicotine is a good thing;
21 right?
22 A. Yes, I do.
23 Q. Paper porosity. I guess I could go through
24 paper porosity, but you think that's a good thing
25 used to reduce tar and nicotine; right?
26 A. Gas phase constituents actually, yes.
27 Q. So that's like -- a little bit like the vent
28 holes, it's just the paper has the holes and it
29 dilutes the smoke; right?
30 A. That's one mechanism, yes.
31 Q. That was one of the things you were involved
32 in in bringing down tar and nicotine when you were

14997

1 working at Philip Morris?
2 A. That is correct.
3 Q. And again, you think that a reduction of tar
4 and nicotine is a good thing?
5 A. Generally, yes.
6 Q. And all this work that you did on reducing
7 tar and nicotine when you were with Philip Morris
8 you believe was to provide smokers with a benefit to
9 their health?
10 A. Well, it was to reduce the risk. It's not
11 actually a benefit.
12 Q. But if you reduce the risk, that is some
13 benefit to the smokers. That's what you were trying
14 to do; right?
15 A. Okay, I can generally agree.
16 Q. Well, in fact, Dr. Farone, you encouraged
17 your family members, your mother, your sister and
18 your brother-in-law, to smoke low-tar cigarettes,
19 didn't you?
20 A. I did, yes.
21 Q. First you suggested that they smoke Carlton;
22 right?
23 A. Well, that was second, but that they --
24 Q. One of the things you suggested they smoke is

25 Carlton; right?
26 A. That's correct.
27 Q. And that's a low tar delivery cigarette made
28 by Brown & Williamson?
29 A. That is correct.
30 Q. And then a product Philip Morris made called
31 Cambridge came out; right?
32 A. Yes.

14998

1 Q. And you suggested they switch to Cambridge;
2 right?
3 A. Correct.
4 Q. And that Cambridge cigarette yielded almost
5 zero tar; right?
6 A. That is correct.
7 Q. That's something you were involved in?
8 A. Yes.
9 Q. We talked yesterday -- I want to talk to you
10 a little bit about nicotine.
11 A. Okay.
12 Q. And you explained to the jury how nicotine is
13 naturally occurring in the tobacco plant; right?
14 A. Yes.
15 Q. So when you put the tobacco, wrap it in the
16 paper, and all the other things that you do to make
17 a cigarette, the cigarette contains nicotine; right?
18 A. Yes.
19 Q. Because that's what tobacco contains?
20 A. Yes.
21 Q. And you didn't really talk about this, but I
22 think maybe one of the other witnesses did. As the
23 tobacco plant is growing, a process called -- let me
24 see if I can use this word correctly.
25 Nicotine is synthesized by the tobacco plant
26 as it's grown as an agricultural product; right?
27 A. Yes. It's synthesized in the roots.
28 Q. Say it again.
29 A. It is synthesized in the roots and
30 transmitted up through the plant.
31 Q. And you described all these different types
32 of tobacco yesterday, Bright, Burley, Oriental, just

14999

1 as examples; right?
2 A. Yes.
3 Q. And each of these different types of tobacco
4 contains a different level of nicotine?
5 A. It can, yes.
6 Q. It can, okay. Let's talk about that.
7 The level of nicotine will vary from crop to
8 crop?
9 A. That is correct.
10 Q. And it can vary from year to year, the level
11 of nicotine; right?
12 A. Well, that is crop to crop, but, yes.
13 Q. Okay. Thank you.
14 But anyway, for example, we hear about the
15 grapes that make wine. They vary from crop to crop,
16 like the tobacco plant; correct?
17 A. That is correct.
18 Q. Because the weather is different?
19 A. Correct.
20 Q. And when the tobacco leaves and stems come
21 into the manufacturing plant to be made into

22 cigarettes, they already contain some level of
23 nicotine; right?
24 A. Yes.
25 Q. Now, the government grades tobacco, doesn't
26 it?
27 A. The government is involved in grading, yes.
28 Q. And grading involves the level of nicotine?
29 A. Well, that's one of the characteristics of
30 the grades, yes.
31 Q. And that's one of the things the government
32 does; right?

15000

1 A. Grading, yes.
2 Q. So when it's time for the tobacco to come to
3 the plant to be manufactured into a cigarette, and
4 it goes through the manufacturing process, it
5 actually loses nicotine compared to what it was
6 before the manufacturing process; right?
7 A. There are some losses, yes.
8 Q. There is less nicotine in the final cigarette
9 than there was in the actual tobacco plant; right?
10 A. That is correct.
11 Q. Now, when you got to Philip Morris in 1976,
12 you knew that Philip Morris had marketed a number of
13 different brands of cigarettes; right?
14 A. That's correct.
15 Q. The different brands of cigarettes had
16 different tar and nicotine deliveries associated
17 with them, didn't they?
18 A. They did.
19 Q. Every ad for a cigarette tells the tar and
20 nicotine level for that cigarette based on the
21 Federal Trade Commission test; right?
22 A. Well, I don't know that every one, but I can
23 agree, yes.
24 Q. All right. And am I correct that your wife,
25 Dr. Farone, actually helped developed the FTC test
26 when she worked for the American Tobacco Company?
27 A. She was involved in it, that's correct.
28 Q. She helped make the Cambridge pad?
29 A. She helped test the various kind of pads to
30 find the one that was the most complete removal.
31 Q. And the Cambridge pad is that pad that
32 catches the tar and nicotine in the smoking machine?

15001

1 A. That is correct.
2 Q. All right. Let's just take a Marlboro for a
3 second, Doctor.
4 If the advertisement for a Marlboro cigarette
5 says that it delivers 1.1 milligram of nicotine as
6 measured by the FTC method, then each Marlboro
7 cigarette should deliver the same general amount of
8 nicotine if measured by the FTC; right?
9 A. Well, there is a variability allowed, but
10 generally you want to keep it as tight as you can.
11 Q. If companies -- if cigarettes were wildly
12 different from cigarette to cigarette and pack to
13 pack, the cigarette companies would not be able to
14 avoid violating the FTC rules; right?
15 A. That is correct.
16 Q. And probably the customers who liked that
17 brand wouldn't be too happy about it either, would
18 they?

19 A. It would be altogether different, yes.
20 Q. When people buy their favorite brand of
21 cigarette, they expect it to taste the same; right?
22 A. Yes.
23 Q. They don't want their brand to be strong one
24 day and weak the next day?
25 A. I can agree.
26 Q. Indeed, Dr. Farone, consistency is a major
27 goal of every product manufacturer; right?
28 A. Yes.
29 Q. In other words, when you were at Lever
30 Brothers, and you talked about toothpaste that was
31 made by Lever Brothers; right?
32 A. Yes.

15002

1 Q. Do you remember that?
2 A. Yes, I do.
3 Q. Any particular brand of toothpaste that Lever
4 Brothers manufactured, you wanted it to taste the
5 same; right?
6 A. Yes.
7 Q. And you wanted it to come out of the tube the
8 same; right?
9 A. I can agree, yes.
10 Q. And that's what's called consistency in
11 manufacturing; right?
12 A. Yes.
13 Q. For example, Diet Pepsi, someone who likes to
14 drink Diet Pepsi wants it to taste the same each
15 time they buy it; right?
16 A. Yes.
17 Q. Now, you know that Philip Morris does not add
18 nicotine to cigarettes in the process of
19 manufacturing; right?
20 A. That is correct.
21 Q. Philip Morris didn't spike cigarettes with
22 nicotine?
23 A. No, if by spike you mean add extra nicotine.
24 Q. Yes.
25 A. No.
26 Q. In fact, there is less nicotine in the final
27 cigarette than in the tobacco from the field?
28 A. That is correct.
29 Q. All right. Now, Dr. Farone, you told the
30 jury yesterday that one way Philip Morris could have
31 made a safer cigarette is to add nicotine to low
32 delivery cigarettes?

15003

1 A. To the filter of the Cambridge cigarette,
2 yes.
3 Q. Actually add nicotine into the filter?
4 A. Yes.
5 Q. Some people might call your suggestion adding
6 nicotine to the filter nicotine manipulation,
7 wouldn't they?
8 A. Yes. It's a -- yes.
9 Q. You think that controlling the level of
10 nicotine is a good thing when it's done to reduce
11 the smoker's exposure to carcinogens; right?
12 A. Yes, I do.
13 Q. Dr. Farone, you mentioned acetaldehyde
14 yesterday as a constituent in cigarette smoke;
15 right?

16 A. Yes, I did.
17 Q. I believe you stated that cigarettes deliver
18 from 100 micrograms to 1000 micrograms of
19 acetaldehyde?
20 A. I gave that as a range. There are -- I can
21 think of one that's 70 and I can think of one that's
22 1500. So there are a few outside the range.
23 Q. Fair enough. But that's a reasonable range?
24 A. Yes.
25 Q. All right. So on the upper end if we were to
26 convert those measurements into milligrams, a high
27 yield cigarette would deliver about one milligram of
28 acetaldehyde?
29 A. That would be the highest end, yes.
30 Q. If someone were to suggest that a Marlboro
31 cigarette delivered eight hundred milligrams of
32 acetaldehyde, not micrograms, that would be kind of

15004

1 crazy, wouldn't it?
2 A. Well, it's probably a typographical error.
3 Q. You can't imagine a cigarette delivering
4 something like that; right?
5 A. No.
6 Q. Now, for example, a Marlboro, a Marlboro
7 would only deliver about one milligram, if that
8 much, of acetaldehyde; right?
9 A. Yes.
10 Q. Now, Dr. Farone, you have seen one of these.
11 There is the blue, there is the pink, and then there
12 is the sugar; right? You have seen that commercial?
13 A. Yes.
14 Q. This is a Sweet 'n Low packet?
15 A. Yes.
16 Q. And this is --
17 MR. GAY:
18 May I approach, Your Honor?
19 THE COURT:
20 Yes.
21 A. It's one gram.
22 Q. You know it's one gram, okay.
23 And we are talking about with these
24 measurements, we are talking about 1/1000ths of this
25 would be a milligram; right?
26 A. Yes.
27 Q. Someone wrote this down for me I want you to
28 know.
29 It's your opinion that when smokers inhale
30 cigarette smoke, their bodies absorb acetaldehyde in
31 it; right?
32 A. Not all of it because you exhale. But a

15005

1 large portion of it, yes.
2 Q. And you agree that acetaldehyde from
3 mainstream cigarette smoke does not go into the
4 bloodstream; right?
5 A. No, I don't think I agree with that. It's
6 maybe -- okay, directly as acetaldehyde?
7 Q. Right.
8 A. That's probably correct.
9 Q. That's really what I meant to say. Thank you
10 for that correction. It's actually metabolized into
11 acetic acid; right?
12 A. Yes, and other -- there is a whole chain of

13 chemicals.
14 Q. So you agree then that acetaldehyde doesn't
15 reach the smoker's brain in that form?
16 A. No.
17 Q. Acetic acid might get to the brain?
18 A. Well, there is some of it that isn't
19 converted excreted through the liver.
20 I'm not sure exactly what we are talking
21 about here, but there are excretion mechanisms
22 involving acetaldehyde. But in general, a very
23 large portion of it is converted into acetic acid,
24 if that's --
25 Q. And acetic acid you agree might get to the
26 brain?
27 A. Yes.
28 Q. But acetic acid is not reinforcing; right?
29 A. Talking about --
30 Q. Talking about acetic acid.
31 A. Yeah. Not that I'm aware of.
32 MR. GAY:

15006

1 Your Honor, this is a good stopping
2 point.
3 THE COURT:
4 We will recess until 11:00 by the
5 wall clock.
6 (In open court without a jury
7 present:)
8 THE COURT:
9 The jurors have left the courtroom.
10 Do plaintiffs wish to put anything of
11 record as a result of this morning's
12 proceedings?
13 MR. STEPHEN HERMAN:
14 No, Your Honor. But I have one --
15 MR. RUSS HERMAN:
16 Go ahead.
17 MR. STEPHEN HERMAN:
18 I have one brief question.
19 The exhibits that Your Honor ruled on
20 Monday afternoon, are they in evidence or
21 do we need to formally offer them?
22 THE COURT:
23 If you offered them and I received
24 them in evidence, I announced that. And I
25 have notes.
26 MR. STEPHEN HERMAN:
27 Okay, thank you, Your Honor.
28 THE COURT:
29 If you give me a list, I will
30 indicate on the list which ones I believe
31 have been received into evidence.
32 MR. STEPHEN HERMAN:

15007

1 Thank you.
2 THE COURT:
3 Anything else by plaintiffs?
4 Defendants, anything for the record?
5 MR. WITTMANN:
6 No, Your Honor.
7 THE COURT:
8 We will recess until 11:00.
9 (A recess is taken at 10:45 a.m.)

10 -- -- --
11 (In open court with a jury present at
12 11:05 a.m.):
13 THE COURT:
14 Please be seated.
15 MR. GAY:
16 Your Honor, before the break I had
17 shown Dr. Farone Defendant's Exhibit
18 SA-1803, the Wynder article. I would just
19 move to admit it at this time.
20 THE COURT:
21 Any objection?
22 MR. STEPHEN HERMAN:
23 No objection, Your Honor.
24 THE COURT:
25 The exhibit will be received.
26 MR. GAY:
27 Thank you.
28 BY MR. GAY:
29 Q. Now, Dr. Farone, you talked about biological
30 research yesterday, and during your direct exam you
31 talked about a gentlemen's agreement with respect to
32 biological research. Do you recall that?

15008

1 A. Yes, I do.
2 Q. You didn't make this agreement; right?
3 A. That is correct.
4 Q. But you were told about it; right?
5 A. Yes.
6 Q. Someone told you about this very shortly
7 after you started working for the company; right?
8 A. Yes.
9 Q. All right. You weren't told, however, which
10 companies were part of this agreement; right?
11 A. Not all of them. I was told that at least
12 R. J. Reynolds was part of it.
13 Q. Now, this agreement did not prevent
14 Philip Morris or any other company from doing
15 biological research in general; right?
16 A. That is correct.
17 Q. It didn't stop Philip Morris or any of the
18 other companies from doing in-house biological
19 research including animal research of noncommercial
20 cigarettes?
21 A. That is correct.
22 Q. It didn't prevent in vitro or cellular level
23 testing on commercial cigarettes?
24 A. Well, Philip Morris interpreted it that way,
25 but some of the other companies didn't. I don't
26 think -- I mean, it wasn't that specific.
27 Q. Is that something somebody told you too?
28 A. Which?
29 Q. That Philip Morris interpreted it differently
30 than the other companies?
31 A. No. But I know what we did or didn't do.
32 Q. So it didn't prevent Philip Morris from doing

15009

1 in vitro or cellular level testing on commercial
2 cigarettes; right?
3 A. We didn't do that, so --
4 Q. Well, let's go on. It didn't prohibit animal
5 research on commercial cigarettes outside the
6 companies such as at contract labs?

7 A. That's my understanding, yes.
8 Q. It didn't prohibit any biological research
9 conducted through the Council for Tobacco Research?
10 A. That's correct.
11 Q. It didn't prohibit Philip Morris from doing
12 biological research on commercial cigarettes at
13 INBIFO?
14 A. That's my understanding.
15 Q. Correct?
16 A. That's my understanding.
17 Q. And it didn't prevent any of the other
18 companies from doing whatever research they desired
19 at whatever organizations like INBIFO that they had?
20 Do you want me to repeat that?
21 A. That's a little confusing. Outside the U.S.,
22 is that what you meant?
23 Q. That's what I meant.
24 A. Then I can agree.
25 Q. Okay, fair enough. So let's talk about some
26 of the biological research that was done by or on
27 behalf of the tobacco companies; okay?
28 A. Okay.
29 Q. You weren't -- although you weren't in charge
30 of it, and you didn't do any yourself while you were
31 at Philip Morris, you saw lots of it; right?
32 A. Yes. We needed it for our work, yes.

15010

1 Q. You saw lots of this biological research that
2 basically involves in vitro and in vivo testing;
3 right?
4 A. Correct.
5 Q. Now, in vitro involves testing usually in a
6 Petri dish on living cells; right?
7 A. Generally, yes.
8 Q. Or tissues?
9 A. Yes.
10 Q. It can be done in a test tube also?
11 A. Yes.
12 Q. A test tube or Petri dish?
13 A. Usually, yes.
14 Q. And Philip Morris did lots of in vitro
15 testing; right?
16 A. That is correct.
17 Q. You thought that it was important that
18 Philip Morris do that type of testing?
19 A. Yes.
20 Q. You needed that type of testing; right?
21 A. Yes.
22 Q. And a lot of this testing was done at
23 Philip Morris in Richmond, Virginia; right?
24 A. Yes.
25 Q. You were sent copies of the biological
26 testing that was done in Richmond?
27 A. Yes.
28 Q. The results of the testing was kept in a
29 library at Philip Morris in Richmond, Virginia?
30 A. That is correct.
31 Q. As far as you know, the results of that
32 testing are still in Philip Morris' files in

15011

1 Richmond?
2 A. Yes.
3 Q. And again, you talked about another place

4 where biological research was done. It's a place
5 called INBIFO?
6 A. That's correct.
7 Q. INBIFO, that's I-N-B-I-F-O, is a well known,
8 well qualified research laboratory in Europe; right?
9 A. Correct.
10 Q. You are familiar with the INBIFO lab --
11 excuse me. You were familiar with the fact that
12 INBIFO was a lab in Europe before you even came to
13 Philip Morris; right?
14 A. That is correct.
15 Q. It was around a long time before
16 Philip Morris bought it?
17 A. That's right.
18 Q. And it did research, all types of research,
19 for American companies other than Philip Morris;
20 right?
21 A. Yes.
22 Q. Back in the 1960s, a lot of different
23 American companies gave contracts to this INBIFO lab
24 in Europe to do biological testing of their products?
25 A. That's correct.
26 Q. There is nothing wrong with an American
27 company doing biological research in a laboratory in
28 Europe, is there?
29 A. No.
30 Q. In fact, you talked about your employment at
31 Lever Brothers; right?
32 A. Yes.

15012

1 Q. Lever Brothers was a worldwide manufacturer
2 of products, consumer products?
3 A. Yes.
4 Q. And Lever Brothers actually had three labs in
5 Europe; right?
6 A. Well, more. But, yes.
7 Q. More than three, okay.
8 Philip Morris manufactured and sold
9 cigarettes in Europe; didn't it?
10 A. Yes.
11 Q. What INBIFO did was biological research?
12 A. That is correct.
13 Q. And there was a lot of biological research
14 for Philip Morris at INBIFO?
15 A. That is correct.
16 Q. It did in vitro studies, these studies in the
17 dish; right?
18 A. That is correct.
19 Q. And they did in vivo studies, a type of
20 biological study involving live animals; right?
21 A. That is correct.
22 Q. This biological testing, would it also
23 include mouse skin paintings?
24 A. It did.
25 Q. In vivo studies also would include smoke
26 inhalation experiments with animals?
27 A. That is correct.
28 Q. So INBIFO did animal inhalation studies for
29 Philip Morris?
30 A. Yes.
31 Q. Now, the Council for Tobacco Research also
32 funded animal inhalation studies; correct?

15013

1 A. That is correct.
2 Q. And they funded studies that did mouse skin
3 painting?
4 A. They did.
5 Q. The idea behind inhalation studies is to
6 expose the animals to smoke as it would come out of
7 a cigarette and get them to inhale it; right?
8 A. Well, that's one way you could do it, yes.
9 Q. And getting an animal to do that is not easy;
10 correct?
11 A. It's very difficult, yes.
12 Q. You need expertise to do that study?
13 A. Yes.
14 Q. And INBIFO had that expertise; right?
15 A. Among other places, yes.
16 Q. Because one of the difficulties is to get
17 animals to breathe in smoke; right?
18 A. Yes.
19 Q. And you have to have people doing these type
20 of inhalation studies who know what they are doing;
21 right?
22 A. That's correct.
23 Q. And INBIFO had those people?
24 A. They did, yes.
25 Q. For instance, you need veterinarians if you
26 are going to do inhalation studies, don't you?
27 A. Yes.
28 Q. INBIFO had veterinarians?
29 A. That is correct.
30 Q. You need special equipment; right?
31 A. Yes.
32 Q. And INBIFO had that equipment?

15014

1 A. That's true.
2 Q. There are limited numbers of laboratories --
3 there are a limit number of laboratories around the
4 world that can do inhalation studies. Is that fair
5 to say?
6 A. Yes.
7 Q. Now, Philip Morris also did biological
8 research through contract labs, labs Philip Morris
9 didn't own, but contracted to do research for them;
10 right?
11 A. That is correct.
12 Q. That's a pretty common thing for companies to
13 do, again; right?
14 A. Yes.
15 Q. When you were at Lever Brothers, Lever
16 Brothers frequently used outside contract labs to
17 perform biological research?
18 A. Yes, they did.
19 THE WITNESS:
20 Your Honor, may I explain?
21 THE COURT:
22 Yes.
23 A. Use contract labs to validate the internal
24 work. Did it both internally and externally, which
25 was a sort of standard, to do both.
26 Q. And one of the contract labs that
27 Philip Morris used was a lab called Hazelton
28 Laboratories; right?
29 A. Yes.
30 Q. And Hazelton is a very well known and

31 respected laboratory; right?

32 A. It is.

15015

1 Q. When you were at Lever Brothers, you used
2 Hazelton Labs; right?

3 A. We did.

4 Q. So Philip Morris was doing a lot of
5 biological research itself through INBIFO and
6 through contract laboratories; right?

7 A. That is correct.

8 Q. Now, we talked just very briefly about the
9 biological research being done through the Council
10 for Tobacco Research just briefly this morning;
11 right?

12 A. That is correct.

13 Q. And you mentioned something yesterday about
14 the Council for Tobacco Research and the research it
15 was doing and whether it was available to you at
16 Philip Morris. Do you remember that testimony?

17 A. Yes, I do.

18 Q. Were you suggesting that the research that
19 was being conducted by the Council for Tobacco
20 Research somehow you didn't have access to?

21 A. During the time of the research.

22 Q. Say again?

23 A. Well, after it's completed and published I
24 had access to it. But during the time when the
25 research was being done I did not see it. That's
26 the testimony.

27 In other words, it may take six years between
28 the time you start the research and the time it gets
29 published. During that period, I didn't have access
30 to it. When it is published, everybody has access
31 to it.

32 Q. Well, the CTR, Council for Tobacco Research,

15016

1 publishes an annual report every year, doesn't it?

2 A. Yes. It tells you the ongoing research.

3 Q. It tells you not only the ongoing research,
4 but it tells you the published research, doesn't it?

5 A. Yes.

6 Q. Excuse me. I'm sorry, I apologize to you,
7 that was not a good question. I messed my question
8 up. Let me start again.

9 It tells you the ongoing research that's
10 being conducted by CTR on an annual basis; right?

11 A. It tells you the projects, yes.

12 Q. And it also tells you the completed projects;
13 right?

14 A. That is correct.

15 Q. And you could find that out by going to the
16 annual report of the Council for Tobacco Research
17 any year you wanted to; right?

18 A. That report is available, yes.

19 Q. And that report, Council for Tobacco Research
20 report, publishes comprehensively all the research
21 that was being done by the Council for Tobacco
22 Research on an annual basis; right?

23 A. Well, it publishes the names of the
24 projects. It doesn't publish the results until it's
25 completed, and then it tells you what publications
26 are available.

27 Q. Well, you don't publish results until you

28 complete the experiments typically at all; right?
29 A. Well, but, that's the point. Typically you
30 don't, but Dr. Osdene had access to those results
31 before they were published.
32 Q. Well, did you ever have any difficulty with

15017

1 getting results of what CTR, the Council for Tobacco
2 Research, published?

3 A. No. Not what was published, no problem.

4 Q. I mean, we don't have to go through these
5 annual CTR reports to show what was available to you
6 if you just wanted to look at the annual report;
7 right?

8 A. That is correct. No, that was --

9 Q. In other words, this is published information
10 about research that is being done by the Council for
11 Tobacco Research every year; right?

12 A. That is correct.

13 Q. Dr. Farone, I want to jump to another topic
14 here on constituents of tobacco smoke; right?

15 A. Yes.

16 Q. You talked about that yesterday. You
17 remember showing the jury a chart that listed some
18 of the constituents in cigarette smoke?

19 A. I think I showed several such charts.

20 MR. GAY:

21 Carl, could you help us out here.

22 WF-8, could you bring it up for us?

23 And may we publish, Your Honor?

24 THE COURT:

25 You may publish it.

26 BY MR. GAY:

27 Q. These are the constituents that you -- one of
28 the charts you showed yesterday; correct?

29 A. That is correct.

30 Q. And there are 19 constituents up there;
31 right?

32 A. Correct.

15018

1 Q. And you indicate in the third column that
2 Philip Morris identified as a constituent in the
3 1960s; right?

4 A. That is correct.

5 Q. Okay.

6 MR. GAY:

7 Ted, could you please pull up
8 Plaintiffs' Exhibit 884?

9 And this is the Surgeon General's
10 report of 1964, and I believe it's in
11 evidence, Your Honor. May we publish?

12 THE COURT:

13 You believe it's in evidence, you
14 said?

15 MR. GAY:

16 Yes. It's a Plaintiffs' Exhibit in
17 evidence.

18 MR. STEPHEN HERMAN:

19 No objection, Your Honor. I'm not
20 sure it's in evidence, but we are not
21 going to object to it.

22 THE COURT:

23 You may publish it.

24 BY MR. GAY:

25 Q. Doctor, you see this is the 1964 Surgeon
26 General's report?

27 A. I do.

28 MR. GAY:

29 May we publish page 61, Your Honor?

30 THE COURT:

31 You may publish it.

32 MR. GAY:

15019

1 Ted, could you highlight the bottom
2 portion of the first full paragraph,
3 please?

4 BY MR. GAY:

5 Q. Dr. Farone, in 1964, the Surgeon General in
6 his report says assays -- now, assays, those are
7 these biological type tests?

8 A. No, not -- well, they are, but they are
9 different in 1964, yeah.

10 Q. State of the art again; right?

11 A. Correct.

12 Q. So we were not as -- I don't want to say
13 competent, but the area of science hadn't advanced
14 to the point where it is today in 1964; right?

15 A. Well, that's generally true, yes.

16 Q. Assays of known components of the gas
17 phase showed the following compounds to
18 possess such activity.

19 And I think they are talking about ciliary
20 transport activity?

21 A. Yes, this has to do with -- yes.

22 Q. One of the components they mention is
23 hydrogen cyanide. Do you see that?

24 A. Yes.

25 Q. And then formaldehyde, acetaldehyde,
26 acrolein, and ammonia, although no one of these
27 occurs at levels high enough to produce the effect
28 noted for smoke; right?

29 A. That is correct.

30 Q. Now, those are some of the constituents that
31 were listed on your 19 constituents that you showed
32 the jury; right?

15020

1 A. Yes.

2 THE WITNESS:

3 May I explain, Your Honor?

4 THE COURT:

5 Yes.

6 A. This is specific to ciliary transport. Mine
7 was related to cancer causing.

8 So it's slightly different what we are
9 talking about, that's all.

10 Q. Right. Well, that's fine. But these are
11 constituents known to the Surgeon General in 1964;
12 right?

13 A. That is correct.

14 Q. Anyone could access this information?

15 A. That is true.

16 Q. Correct?

17 A. Yes.

18 Q. And if acrolein, for example, that's one of
19 the ones you put on your list, if acrolein was
20 identified in the Surgeon General's report in 1964,
21 it was not hidden that it was a constituent of

22 cigarette smoke; right?
23 A. That is correct.
24 Q. Nor was hydrogen cyanide. That was another
25 one of the 19 constituents on your list; right?
26 A. I don't recall, but, yes, it wasn't hidden,
27 yes.
28 Q. The same sentence identifies formaldehyde;
29 right? That was one of the constituents you put on
30 your list; right?
31 A. Yes.
32 Q. It also identifies ammonia?

15021

1 A. Yes.
2 Q. That was another one of the constituents on
3 your chart?
4 A. Yes.
5 MR. GAY:
6 Can we go to the bottom of page 61,
7 Ted, please? And if you could blow up
8 that and blow up the title of the
9 paragraph, if you would?
10 BY MR. GAY:
11 Q. This is again from the 1964 Surgeon General's
12 report; correct, Dr. Farone?
13 A. Yes, it is.
14 Q. It talks about pesticides and additives. And
15 farmers use pesticides on tobacco plants so they can
16 grow; right?
17 A. Well --
18 Q. Pesticides are used in connection with the
19 growing of tobacco?
20 A. Yes, that's true.
21 Q. And what the Surgeon General says here is
22 extensive -- we are going to need to go to the next
23 page, but: Extensive federal efforts to discourage
24 the use of arsenicals -- now, that's arsenic; right?
25 A. No. It's chemicals made from arsenic.
26 Q. Okay, fair enough.
27 For the control of tobacco hornworms --
28 that's some type of insect, right, that eats the
29 tobacco?
30 A. That is correct.
31 Q. -- on the growing tobacco crop resulted in
32 a --

15022

1 MR. GAY:
2 We will go to the next page and
3 highlight the first couple of sentences,
4 Ted.
5 BY MR. GAY:
6 Q. So now we have them both together.
7 Extensive federal efforts -- that's the
8 government, right?
9 A. Yes.
10 Q. And their efforts, they are trying to
11 discourage farmers from using arsenicals for the
12 control of tobacco hornworms; right?
13 A. That is correct.
14 Q. So it says: -- on the growing tobacco crop
15 resulted in a sharp decline in the arsenic content
16 of cigarettes after 1950; right?
17 A. Yes.
18 Q. So again, before we finish this, the Surgeon

19 General is again saying he knows arsenic is a
20 constituent of cigarettes; right?
21 A. Yes.
22 MR. GAY:
23 Okay. If we could take the next
24 sentence, Ted, and highlight and blow it
25 up?
26 BY MR. GAY:
27 Q. Now, arsenic was one of the things you put up
28 on the constituent chart and told the jury about;
29 right?
30 A. It is.
31 Q. The Surgeon General in 1964 says:
32 It seems unlikely that the amount of
15023
1 arsenic derived even from unfiltered
2 cigarettes is sufficient to present a
3 health hazard.
4 Right?
5 A. Yes.
6 THE WITNESS:
7 May I explain, Your Honor?
8 THE COURT:
9 You may explain.
10 A. That was in 1964. The level now is .001 ppm
11 per inhalation.
12 Q. Well, we will get to that. We will get to
13 that, Doctor.
14 MR. GAY:
15 Now, Ted, if you could go to page 55
16 of this Surgeon General's report? And
17 Ted, please highlight the second paragraph
18 on this page.
19 BY MR. GAY:
20 Q. Now, Dr. Farone, you see where the Surgeon
21 General mentions nickel is present in cigarettes in
22 trace amounts?
23 A. Yes.
24 Q. That was another one of the constituents you
25 put up on your chart; correct?
26 A. Yes.
27 Q. And then it goes on to say spectrographic
28 analysis has shown that the presence of chromium --
29 is that on your chart too?
30 A. Yes. These are all things I said were known
31 in 1960, yes.
32 Q. So that chart, you weren't trying to suggest
15024
1 that the tobacco companies were the only ones that
2 knew about those things; right?
3 A. No. That was not what it said.
4 Q. The Surgeon General says here at the last
5 sentence, this level is too low to represent a
6 hazard; right?
7 A. Yes, that's what it says.
8 Q. So we could go through each one of the 19
9 constituents you put on your chart with this same
10 process and show that these things were known to the
11 Surgeon General and known to the public health
12 community; right?
13 A. Yes.
14 Q. All right. Now, one of the reasons it was
15 known to the Surgeon General was that the tobacco

16 companies actually gave submissions to the Surgeon
17 General in 1964, didn't they?
18 A. They did.
19 Q. And isn't it true that many of the same
20 constituents that we have been talking about and
21 that are on your list, your list of 19,
22 Philip Morris and the other companies gave to the
23 Surgeon General?
24 A. They were on their list, yes, many of them.
25 Q. And the Surgeon General had these available
26 to him to look at and study; right? The public
27 health community had it to look at and study; right?
28 A. Yes, they did.
29 Q. All right. I want to talk to you a little
30 bit about reference cigarettes, Dr. Farone. You
31 mentioned reference cigarettes.
32 You remember that yesterday you told the jury

15025

1 about Philip Morris doing research with reference
2 cigarettes?
3 A. Yes. In using reference cigarettes, yes.
4 Q. And reference cigarettes are actually
5 cigarettes; correct?
6 A. Yes.
7 Q. A reference cigarette has tobacco wrapped up
8 in paper just like a commercially sold cigarette;
9 right?
10 A. Well, they are cigarettes, yes.
11 Q. And it would meet what you call the BATF
12 definition yesterday; right?
13 A. Yes.
14 Q. The BATF is the Bureau of Alcohol, Tobacco
15 and Firearms; right?
16 A. That is correct.
17 Q. Some reference cigarettes come with filters,
18 don't they?
19 A. Yes.
20 Q. And there are low tar reference cigarettes?
21 A. Correct.
22 Q. There are high tar reference cigarettes?
23 A. Correct.
24 Q. When reference cigarettes are smoked, they
25 create nitrosamines?
26 A. Yes.
27 Q. When reference cigarettes are smoked, they
28 create aldehydes?
29 A. Yes.
30 Q. And all -- really, when you smoke a reference
31 cigarette, they create all the other smoke
32 constituents you have identified to this jury;

15026

1 right?
2 A. Yes.
3 Q. Reference cigarettes go back a long time,
4 don't they?
5 A. They do.
6 Q. They weren't invented by tobacco companies?
7 A. No, that's correct.
8 Q. They were developed by folks at the
9 University of Kentucky; correct?
10 A. That was one place, yes.
11 Q. The National Cancer Institute also helped to
12 develop reference cigarettes?

13 A. That is correct.
14 Q. The National Cancer Institute is one of those
15 public health organizations in our country; right?
16 A. Yes.
17 Q. The idea behind reference cigarettes is to
18 have a control in an experiment so different
19 researchers in different places can judge their data
20 against the other people's data; right?
21 A. Yes.
22 Q. You are not suggesting there is anything
23 wrong with reference cigarettes, testing reference
24 cigarettes; right?
25 A. No.
26 THE WITNESS:
27 May I explain, Your Honor?
28 THE COURT:
29 Yes, you may.
30 A. As long as the information isn't limited to
31 reference cigarettes. The idea, as you said, was to
32 test your commercial brands against the reference
15027

1 cigarettes.
2 Q. In fact, many scientists do research with
3 reference cigarettes; correct?
4 A. That is correct.
5 Q. Scientists all over the world have used
6 reference cigarettes to study the effects of
7 cigarettes?
8 A. That is correct.
9 Q. Philip Morris did a lot of work with
10 reference cigarettes to study the effects of
11 cigarettes; right?
12 A. Yes.
13 Q. In fact, everybody doing tobacco research in
14 the world uses reference cigarettes?
15 A. They do.
16 Q. Now, yesterday you suggested to this jury
17 that Philip Morris should have done research with
18 commercially sold cigarettes instead of reference
19 cigarettes; right?
20 A. No.
21 Q. Let me rephrase the question. You suggested
22 to this jury that Philip Morris should have done
23 research with commercially sold cigarettes; right?
24 A. That is correct.
25 Q. If research showed that commercial cigarettes
26 were no more biologically active than reference
27 cigarettes with the same tar levels, then you would
28 agree that reference cigarettes are perfectly
29 appropriate to use in research; right?
30 A. No.
31 Q. The difference between a reference cigarette
32 and a commercially sold cigarette is that the
15028

1 commercially sold cigarette has additives or
2 ingredients that are not present in the reference
3 cigarette; right?
4 A. That's part of it, yes.
5 Q. Okay. And you can't point to any study that
6 show that the additives or ingredients which are
7 put -- which are not put in reference cigarettes
8 increase the biological activity of the cigarette;
9 right?

10 A. I can. Yes, I can.
11 Q. You know that since the mid1980s, the tobacco
12 industry has been required by law to submit a list
13 of the additives it uses to the Department of Health
14 and Human Services, don't you?
15 A. Yes, I do.
16 Q. Since 1985 or '86, they have had to tell the
17 government every additive and ingredient they put in
18 cigarettes; right?
19 A. Yes.
20 Q. And they have to tell the Department of
21 Health and Human Services about that, don't they?
22 A. They do.
23 Q. And the Department of Human Services gets
24 that list of ingredients in tobacco in cigarettes,
25 right, and they are charged with the responsibility
26 of reporting to Congress about those additives and
27 ingredients, aren't they?
28 A. That's my understanding, yes.
29 Q. And they are charged with the responsibility
30 about these additives and ingredients to report if
31 there are any potential health problems associated
32 with the additives and ingredients on that list;

15029

1 right?
2 A. That is correct.
3 Q. And since 1985, the Department of Health and
4 Human Services have never reported to Congress that
5 there is a problem associated with the additives on
6 the list; right?
7 A. I am not sure of that. I know that they have
8 published papers on the potential hazards.
9 Q. Don't you know that they have never reported
10 to Congress that there is a problem -- health
11 problem associated with the additives and
12 ingredients that is reported to them by law by these
13 companies since 1985?
14 A. I'm not aware of any such report, if that's
15 what you are asking.
16 Q. You don't know?
17 A. I don't know.
18 Q. You don't know of any report that they have
19 issued that there is a problem with it?
20 A. No, I do know of those reports, but not to
21 Congress.
22 Q. Right, that's what I'm talking about. The
23 Department of Health and Human Services has a
24 responsibility to do that; right?
25 A. That's my understanding.
26 Q. And to today, what is it, 18 -- 17, 18 years
27 later, they have never reported such a problem to
28 the Congress; right?
29 A. To Congress, I believe that's correct.
30 Q. Now, Dr. Farone, the Surgeon General has
31 concluded, has he not, that there is no such thing
32 as a safe cigarette?

15030

1 A. Yes.
2 Q. Your answer was yes?
3 A. Well, that's what I understand. There is no
4 mention in any Surgeon General's report of a safe
5 cigarette.
6 Q. The Surgeon General and the other public

7 health authorities have expressed the view for a
8 long time that there is no such thing as a safe
9 cigarette; isn't that right?

10 A. I'm not quite sure that's exactly correct. I
11 mean, the idea is they recommend not smoking. So,
12 yes, they don't recognize a safe cigarette as being
13 an alternative.

14 Q. Right, exactly. And there is no safe level
15 of cigarette consumption? Can you agree with that?

16 A. No, I can't agree with that. No, I can't
17 agree with that.

18 Q. Doctor, you remember -- let me hand you your
19 testimony from a case in New York that you testified
20 in April of 2001, and direct your attention to page
21 2560, line 20.

22 MR. STEPHEN HERMAN:
23 Excuse me, what's the name of the
24 case?

25 MR. GAY:
26 Blue Cross/Blue Shield.

27 MR. STEPHEN HERMAN:
28 Thank you.

29 BY MR. GAY:
30 Q. Are you there with me, Doctor?

31 THE COURT:
32 Do we know which of the four boxes
15031

1 you gave us this morning contains that
2 deposition, Mr. Gay?

3 THE CLERK:
4 I have the box. I just need the
5 date.

6 MR. GAY:
7 I apologize, Your Honor.

8 THE CLERK:
9 April 10th or 11th?

10 THE COURT:
11 And the date of that testimony?

12 MR. GAY:
13 The date is April the 11th of 2001,
14 Your Honor.

15 THE COURT:
16 I have it.
17 And what page are you referring the
18 witness to?

19 MR. GAY:
20 Page 2560, Your Honor, line 20.

21 A. Okay.

22 Q. Did you have a chance to read above and
23 below, Doctor?

24 A. Yes, I did.

25 Q. And this is a case in which -- one of the,
26 what, 35, 40 cases you have testified in?

27 A. Yes.

28 Q. And this is in the Eastern District of
29 New York. You were sworn to tell the truth and all
30 that stuff; right?

31 A. Correct.

32 Q. And you were testifying against the tobacco
15032

1 companies in this case; right?

2 A. Yes.

3 Q. And you were asked this question at line 20,

4 and did you give this answer?
5 Question: And there is no safe level
6 of cigarette consumption?
7 Answer: No such safer level has been
8 proven, that's correct.
9 Was that your testimony when you gave this
10 testimony to the court in New York?
11 A. Yes.
12 THE WITNESS:
13 And Your Honor, may I read above
14 that, please?
15 THE COURT:
16 What do you wish to read?
17 THE WITNESS:
18 The definition of the safe
19 cigarette. Because this is talking about
20 one that doesn't cause disease.
21 THE COURT:
22 Are you speaking of lines 13 and 14?
23 THE WITNESS:
24 Lines 13 and 14, correct.
25 THE COURT:
26 Yes, you may read that.
27 A. The question was based on a safe cigarette
28 would be one that didn't cause disease, and my
29 answer was that's right, that is a definition, not
30 the one I used yesterday of increased risk of one in
31 a hundred thousand.
32 Q. And every cigarette that is manufactured and
15033
1 sold in this country contains a warning about
2 causing disease, does it not?
3 A. Yes.
4 Q. Thank you, Doctor.
5 Now, can you agree with me, Doctor, that
6 there is no consensus -- in other words, broad
7 agreement -- in the scientific community that
8 reducing or removing any particular constituent of
9 smoke would prevent smokers from getting lung cancer?
10 A. I'm not quite sure I understood the
11 question. You mean short of removing them all?
12 Q. Yes.
13 A. Then I can agree with you.
14 Q. If you took everything out of smoke, then it
15 wouldn't cause cancer; right?
16 A. Yes.
17 Q. But if you can't, there is no consensus in
18 the scientific community that reducing or removing
19 any particular constituent in smoke would prevent
20 smokers from getting lung cancer; right?
21 A. Yes.
22 THE WITNESS:
23 May I explain, Your Honor?
24 THE COURT:
25 Yes.
26 A. That's because there are forty some odd
27 things that can cause cancer. So removing any one
28 of them isn't going to solve the problem.
29 Q. So just removing one or some of them, as you
30 say, won't solve the problem?
31 A. That is correct.
32 Q. It won't make cigarettes safe?

15034

1 A. It won't make it safe. It could make it
2 safer.
3 Q. Well, let's not talk about safe cigarettes
4 for a moment.
5 A. All right.
6 Q. But about reduced risk or less hazardous
7 cigarettes; all right?
8 A. Okay.
9 Q. There is no government standard for what
10 constitutes a reduced risk cigarette, is there?
11 A. That is correct.
12 Q. No federal or state agency has established a
13 battery of tests that they recommend should be used
14 to assess the biological activity of cigarette
15 smoke?
16 A. That is correct.
17 Q. You know that people have different views
18 about what may produce a less hazardous cigarette;
19 right?
20 A. That is correct.
21 Q. Reasonable scientists disagree about these
22 things, don't they?
23 A. They do.
24 Q. And that's not unusual. Scientists disagree
25 about things all the time, just in general?
26 A. In general, yes.
27 Q. Yeah, fair enough.
28 All right. For instance, some people think
29 they ought to take nicotine out of cigarettes;
30 right?
31 A. Yes.
32 Q. Some people think you all ought to leave
15035

1 nicotine in cigarettes; right?
2 A. You are talking about safe or safer?
3 Q. I'm talking about less hazardous cigarettes.
4 A. Reduced risk. Yes, I agree.
5 Q. So scientists disagree about that?
6 A. They do.
7 Q. Many of the constituents in smoke react to
8 each other, don't they?
9 A. Yes.
10 Q. Maybe I should say react with each other.
11 That's a better way to say it; right?
12 A. It is.
13 Q. You have to forgive me, I didn't do well in
14 chemistry in high school.
15 So if you change one of these constituents,
16 you might be affecting another constituent; right?
17 A. Generally, yes.
18 Q. For instance, people think that polycyclic
19 aromatic compounds like benzo(a)pyrene are some of
20 the bad things in smoke; right?
21 A. That is correct.
22 Q. All right. So you can add nitrates to the
23 cigarette and you can reduce polycyclic aromatic
24 hydrocarbons; right?
25 A. That is correct.
26 Q. And a polycyclic aromatic hydrocarbon is like
27 this benzopyrene that you told us about yesterday;
28 right?
29 A. Yes.
30 Q. So adding nitrates to a cigarette would

31 reduce that?

32 A. That is correct.

15036

1 Q. Okay. But when you add the nitrates to
2 reduce the benzo(a)pyrene, you create nitrosamines;
3 correct?

4 A. That's correct too.

5 Q. And nitrosamines are considered by most
6 people some of the worst things in cigarettes;
7 right?

8 A. Correct.

9 Q. Now, let's talk about aldehydes. You said
10 that aldehydes are a constituent of cigarette smoke
11 that may be a problem; right?

12 A. Yes.

13 Q. You can reduce aldehydes if you take sugar
14 out of tobacco; right?

15 A. Yes.

16 Q. But when you reduce sugars, you create
17 polycyclic aromatic hydrocarbons; right?

18 A. Well, I'm not quite sure about what the
19 meaning of the question is at that particular
20 point. I mean, you don't have to create them, but
21 you can create them, if that's what you are asking.

22 Q. By reducing sugars?

23 A. That can create PAHs, I agree with you on
24 that.

25 Q. Okay. And maybe that's a better way of
26 saying it, PAHs; right?

27 A. Yeah, saves time.

28 Q. So we can go through the same kind of
29 analysis with respect to other constituents of
30 smoke: You can decrease one, but you might increase
31 another; right?

32 A. That is correct.

15037

1 Q. So a manufacturer like Philip Morris has to
2 make decisions about which things are potentially
3 the worst; right?

4 A. They do.

5 Q. And which ones maybe aren't so bad, and focus
6 their attention on the worst ones?

7 A. That is correct.

8 Q. And a reasonable scientist and a reasonable
9 manufacturing company has to make trade-offs
10 sometimes; right?

11 A. That's true.

12 Q. About what you are going to put your time and
13 your effort into in trying to create this less
14 hazardous cigarette?

15 A. That is correct.

16 Q. All right. I want to ask you a little bit
17 about consumer acceptability.

18 Consumer acceptability is an important
19 component of developing any product; right?

20 A. Generally that's true, yes.

21 Q. I mean, at Lever Brothers you want the
22 customer to like your toothpaste; right?

23 A. That is correct.

24 Q. And at Philip Morris, they want their
25 customers to like their cigarettes; right?

26 A. Generally, yes.

27 Q. And you don't want to make something that

28 nobody is going to like; right?
29 A. That is correct.
30 Q. That's pretty obvious.
31 A. Yeah.
32 Q. In other words, you might be able to make a
15038
1 cigarette that is absolutely safe, but if nobody
2 smoked it, it wouldn't do anyone any good, would it?
3 A. Well, that's a difficult question. If you
4 didn't --
5 Q. Well, I want you to answer the question, and
6 if you want to explain, you can.
7 A. It wouldn't do anyone good if they were a
8 smoker and they didn't smoke that cigarette.
9 But on the other hand, if that was the
10 cigarette that no one smoked, that would do
11 everybody good. You just have to be careful how we
12 word the question.
13 Q. If you figure out a way as a manufacturer to
14 made a cigarette that no one smoked and put yourself
15 out of business, that would solve the problem?
16 A. It solves the cancer problem, yes.
17 Q. So would you agree with me, Doctor, just in
18 general for cigarette companies, them making a
19 cigarette they want people to buy and smoke, that
20 taste is an important factor?
21 A. I can agree with that, yes.
22 Q. Kind of like a cigar. Cigar makers try to
23 make cigars that they think people will find taste
24 good; right?
25 A. Generally, yes.
26 Q. All right. And when you start changing the
27 constituents of cigarettes, you affect the taste,
28 don't you?
29 A. You can, yes.
30 Q. Okay. Now, how a cigarette draws -- in other
31 words, when you suck in on a cigarette, how it draws
32 can also affect whether the consumer likes it or

15039

1 not?
2 A. Generally, yes.
3 Q. Okay. Lightability, the ability to light the
4 cigarette easily, can affect the way the consumer
5 likes the cigarette?
6 A. Yes.
7 Q. In other words, if it's real hard to light,
8 the consumer might not like it; right?
9 A. I can agree with that.
10 Q. The way it smells, the odor of it, can affect
11 whether the consumer likes it; right?
12 A. Generally, I guess, yes.
13 Q. Now, you showed the jury a drawing of another
14 alternative design yesterday. Do you remember
15 that? You called it an alternative design?
16 A. Well, there were several. I'm not sure
17 which --

MR. GAY:

19 Carl, would you be kind enough to put
20 up WF-17, please?

21 May we publish it, Your Honor?

22 THE COURT:

23 You may publish it.

24 BY MR. GAY:

25 Q. All right. This was the one I was talking
26 about here, Dr. Farone. And just so it's clear, you
27 put this up or it was put up yesterday for you to
28 talk about; right?
29 A. Yes.
30 Q. And it's called a potentially safe cigarette;
31 right?
32 A. Correct.

15040

1 Q. The way I understand this is that it's got
2 some sort of tobacco on the front end of it; right?
3 A. Correct.
4 Q. But it's got a smoke barrier; correct?
5 A. In this model, yes.
6 Q. So the smoke barrier is designed to prevent
7 the smoker from sucking the smoke into his mouth;
8 correct?
9 A. That is correct.
10 Q. And what you meant to convey to this jury is
11 that you would put nicotine, flavor and water, et
12 cetera -- you didn't detail what the et cetera
13 was -- into the filter; right?
14 A. Correct.
15 Q. So what the person who used this gadget would
16 be doing is sucking nicotine and flavor and water
17 into their mouth; is that right?
18 A. That's right.
19 Q. Now, I guess the idea would be if you made it
20 look like a cigarette, but you wouldn't actually
21 smoke it; right?
22 A. Well, it's lit. There is no smoke going into
23 your mouth. You are getting nicotine, flavor and
24 water.
25 Q. It's made to look like a cigarette, but it's
26 not -- you are not going to get any smoke out of it;
27 right?
28 A. You don't smoke it, but it is a cigarette.
29 Q. Well, it is delivering nicotine and flavor
30 and water; right? That's what nicotine aerosols do,
31 isn't it?
32 A. That is correct.

15041

1 Q. And nicotine aerosols are, in fact, on the
2 market?
3 A. But not the form of a cigarette. Yes, they
4 are.
5 Q. No, they don't stick tobacco on the front of
6 a nicotine aerosol; right?
7 A. No, they don't.
8 Q. And that's what your device does; correct?
9 A. Not exactly.
10 THE WITNESS:
11 May I explain, Your Honor?
12 THE COURT:
13 Yes.
14 A. The nicotine aerosols that are being sold are
15 drug products intended to help people stop smoking.
16 They are not flavored to taste good so that they
17 would use them repeatedly, because they don't want
18 people to become addicted to the aerosol.
19 So this is different in that this flavor and
20 nicotine are intended to be acceptable as a
21 permanent saleable substitute for a cigarette and

22 not just something you use to stop smoking.
23 Q. Well, Doctor, nobody is manufacturing
24 anything like this in the world; right?
25 A. No. That's my point, yes.
26 Q. And in the 1980s, there was a gadget similar
27 to this that was marketed by a company, wasn't
28 there?
29 A. I don't know which one you are referring to.
30 Q. I'm talking about a product called Favor.
31 A. Yes, I remember that.
32 Q. And Favor was manufactured by a company
15042

1 called Advanced Tobacco Products; do you remember
2 that?
3 A. Vaguely, yes.
4 Q. And it consisted of a hollow tube with
5 nicotine at the end; right?
6 A. Yes, if I recall correctly. I don't remember
7 exactly. We looked at them at one point.
8 Q. So you were sucking nicotine in through this
9 tube that was called Favor; right?
10 A. Something like that, yes.
11 Q. And the FDA, the Food and Drug
12 Administration, which is a federal agency; correct?
13 A. Yes.
14 Q. They required Advanced Tobacco Products to
15 stop selling Favor as a cigarette; right?
16 A. That's my understanding.

17 THE WITNESS:
18 May I explain, Your Honor?
19 THE COURT:
20 Yes.

21 BY MR. GAY:
22 Q. It's your understanding that's correct?
23 A. Yes, but it wasn't a cigarette. It's not
24 tobacco wrapped in paper, which this is.
25 Q. Because you weren't inhaling smoke in the
26 Favor product; right? It wasn't a cigarette?
27 A. I'm sorry. My understanding was it didn't
28 have tobacco in it, so it's not a cigarette.
29 Q. So your idea is to just put tobacco in front
30 of it, but don't inhale it, and that takes care of
31 the problem. Is that your theory?
32 A. No. I'm only saying this meets the
15043

1 definition of a cigarette, that's all.
2 Q. Have you conducted any biological testing on
3 any gadget like this?
4 A. Not specifically.
5 THE WITNESS:
6 May I explain, Your Honor?
7 THE COURT:
8 Yes.
9 A. But it's been known since 1942 that nicotine,
10 flavor and water will substitute for a cigarette.
11 That's documented in literature.
12 Q. Well, Doctor, the nicotine inhalers that
13 someone can get today are on the market; right?
14 A. Yes.
15 Q. But they require a doctor's prescription,
16 don't they?
17 A. Well, that's the problem, yes.
18 Q. Yeah. Because a doctor has to weigh the

19 risks and benefits of these inhalers to the
20 individual he's treating; right?
21 A. Yes.
22 Q. Because sucking in this nicotine flavor and
23 water and whatever "et cetera" is going to be put
24 into it may have adverse health effects; correct?
25 A. That is correct.
26 Q. And that's why the FDA wants to know what you
27 are doing with it, whether it's safe and effective;
28 correct?
29 A. I'm not quite sure. I mean --
30 Q. Let me back up and let me see if I can make
31 it clear to you.
32 The FDA took Favor that was being advertised
15044

1 as a cigarette off the market in the '80s; right?
2 A. That is correct.
3 Q. And the FDA regulates drugs; right?
4 A. That is correct.
5 Q. And if you are going to -- if you are going
6 to ask someone -- if you are going to sell a gadget
7 like this that administers a drug in this form, you
8 have got to prove to the FDA a number of things;
9 right?
10 A. That is correct, yes.
11 Q. Nicotine aerosols had to do that; right?
12 Right?
13 A. But not this device. It's a cigarette.
14 Q. It's only a cigarette because you put -- you
15 stuck some tobacco in front of it; right? It
16 tobacco isn't inhaled; correct?
17 A. That's right.
18 Q. That's your theory.
19 Have you ever tried to market this, Doctor?
20 A. Well, no, I have never tried to market a
21 cigarette.

22 THE COURT:
23 Mr. Gay --
24 BY MR. GAY:
25 Q. Now, this would be comparable to --
26 THE COURT:
27 Mr. Gay?
28 MR. GAY:
29 Yes, Your Honor?
30 THE COURT:
31 Time for lunch.
32 MR. GAY:

15045

1 Thank you, Your Honor.
2 THE COURT:
3 We will recess until 1:30.
4 (In open court with a jury present:)
5 THE COURT:
6 The jury has left the courtroom.
7 Anything for the record by plaintiffs
8 counsel as a result of the proceedings
9 since the morning recess?
10 MR. RUSS HERMAN:
11 The only thing we have is whether and
12 how much we have to have prepared to
13 present this afternoon, whether the cross
14 is going to last till 3:30 or 4:00?
15 THE COURT:

16 Well, you can talk to Mr. Gay about
17 that. I don't need to address that at
18 this point.

19 MR. GAY:

20 I can tell you I don't have a whole
21 lot left. Maybe a half an hour.

22 THE COURT:

23 Anything by defense counsel?

24 MR. WITTMANN:

25 Yes, Your Honor. I will probably
26 have a half an hour or so with
27 Dr. Farone. That's all.

28 THE COURT:

29 Anyone else on the defense side
30 anticipate cross?

31 MR. LONG:

32 Yes, I do, but not long.

15046

1 THE COURT:

2 We will recess until 1:30.

3 (Whereupon, the hearing recesses at
4 12:01 p.m.)

15047

1 REPORTER'S CERTIFICATE

2
3 I, NICHOLAS A. MARRONE, CCR, Registered
4 Merit Reporter, do hereby certify that the foregoing
5 proceedings were reported by me in shorthand and
6 transcribed under my personal direction and
7 supervision, and is a true and correct transcript,
8 to the best of my ability and understanding.

9 That I am not of counsel, not related to
10 counsel or the parties hereto, and not in any way
11 interested in the outcome of this matter.

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NICHOLAS A. MARRONE (CCR 21011)
CERTIFIED COURT REPORTER
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